AMENDMENTS TO THE CLAIMS

1. (Original) A method of reducing phytotoxicity to a crop (especially maize) at a locus caused by the application thereto of a herbicidal benzoylisoxazole and/or dione 5 derivative of formula (I):

$$(R_2)_Z$$

wherein:

A is a group (A-1) to (A-7):

$$R_{106}$$
 R_{107}
 R_{108}
 R_{108}

or a corresponding formula (A-6a) or (A-7a):

in which the position of the carbonyl group and the group Q are reversed and the double bond in the ring is attached to the carbon atom attached to the group Q;

R is a hydrogen atom or a halogen atom; a straight- or branched chain alkyl, alkenyl or alkynyl group containing from one to six carbon atoms which is optionally substituted by one or more halogen atoms; a cycloalkyl group containing from 3 to 6 carbon atoms optionally substituted by one or more groups R^5 , one or more halogen atoms or a group $-CO_2R^3$; or a group selected from $-CO_2R^3$, COR^5 , cyano, nitro, $-CONR^3R^4$ and $-S(O)_kR^{13}$;

R¹ is a straight- or branched-chain alkyl, alkenyl or alkynyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; or a cycloalkyl group containing from three to six carbon atoms optionally substituted by one or more groups R⁵ or one or more halogen atoms;

 R^2 is a halogen atom; a straight- or branched-chain alkyl, alkenyl or alkynyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; a straight- or branched-chain alkyl group containing up to six carbon atoms which is substituted by one or more groups -OR 5 ; or a group selected from nitro, cyano, $-CO_2R^5$, $-S(O)_pR^6$, $-O(CH_2)_mOR^5$ $-COR^5$, $-NR^{11}$ R^{12} , $-N(R^8)SO_2R^7$, $-N(R^8)CO_2R^7$, $-OR^5$, $-OSO_2R^7$, $-SO_2NR^3R^4$, $-CONR^3R^4$, $-CSNR^3R^4$, $-(CR^9R^{10})_y$ - $S(O)_qR^7$ and $-SF_5$;

or two groups R^2 , on adjacent carbon atoms of the phenyl ring may, together with the carbon atoms to which they are attached, form a 5 to 7 membered saturated or unsaturated heterocyclic ring containing up to three ring heteroatoms selected from nitrogen, oxygen and sulfur, which ring is optionally substituted by one or more groups selected from halogen, nitro, $-S(O)_pR^{13} - C_{1-4}$ alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, = O (or a 5- or 6-membered cyclic acetal thereof), and $= NO-R^3$, it being understood that a sulphur atom, where present in the ring, may be in the form of a group -SO- or $-SO_2-$;

z is an integer from one to five: when z is greater than one the groups R^2 may be the same or different;

R³, R⁴ and R¹⁰⁹ are each independently a hydrogen atom, or a straight- or branched chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms;

R⁵ and R¹¹⁰ are each independently a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms or a straight-or branched-chain alkenyl or alkynyl group containing from two to six (preferably from three to six) carbon atoms which is optionally substituted by one or more halogen atoms;

 R^6 and R^7 , which may be the same or different, are each R^5 ; or phenyl optionally substituted by from one to five groups which may be the same or different selected from a halogen atom, a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms, nitro, cyano, $-CO_2R^5$, $-S(O)_pR^{13}$, $-NR^{11}NR^{12}$, $-OR^5$ and $-CONR^3R^4$;

R⁸, R⁹ and R¹⁰ are each a hydrogen atom or R⁶;

R¹¹ and R¹² are each a hydrogen atom or R⁵;

R¹³ and R¹¹¹ are each a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms;

Q is hydroxy, C_{1-6} alkoxy, OR^{112} , SR^{112} or SR^{111} ;

L is oxygen or NR¹⁰⁹;

 R^{14} , R^{14a} , R^{14b} , R^{15} , R^{15a} , R^{15b} , R^{16} , R^{16a} , R^{16b} , R^{100} , R^{101} , R^{102} , R^{103} , R^{104} , R^{105} , R^{106} , R^{107} and R^{108} are each the same or different groups selected from hydrogen, R^{110} ,

- $(CH_2)_uCO_2R^{109}$, halogen, cyano, C_{1-6} alkoxy, - $(CH_2)_x$ -[phenyl optionally substituted by from one to five groups R^{113} which may be the same or different], and cycloalkyl containing from three to six carbon atoms optionally substituted by C_{1-6} alkyl or - $S(O)_pR^{111}$;

 R^{112} is phenyl optionally substituted by from one to five groups selected from halogen, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} alkoxy and nitro;

 R^{113} is a group selected from halogen, R^{114} , nitro, cyano, $-CO_2R^{115}$, $-S(O)_pR^{111}$, $-OR^{111}$ and $-NR^{115}R^{116}$;

R¹¹⁴ is a straight- or branched- chain alkyl group containing one to three carbon atoms optionally substituted by one or more halogen atoms;

R¹¹⁵ and R¹¹⁶ which may be the same or different, are each a hydrogen atom or R¹¹⁰; p, q and u are each independently zero, one or two;

k and m are each one, two or three;

x is zero or one;

y is an integer from one to four; when y is greater than one, the groups R^9 and R^{10} may be the same or different;

or an agriculturally acceptable salt or metal complex thereof; which method comprises applying to the locus of the crop, preferably before the herbicidal compound, an antidotally effective amount of an antidote compound, and optional partner herbicide.

2. (Original) A method according to claim 1 in which the isoxazole or dione herbicide has the general formula (Ia):

are those wherein:

R is hydrogen or -CO₂Et;

 R^{117} is selected from $-S(O)_pMe$, Me, Et, a chlorine, bromine or fluorine atom, methoxy, ethoxy and $-CH_2S(O)_qMe$;

 R^{118} is selected from a hydrogen atom, a chlorine, bromine or fluorine atom, methoxy, ethoxy and $-S(O)_pMe$;

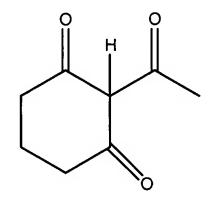
R¹¹⁹ is selected from a hydrogen atom, a chlorine, bromine or fluorine atom, methoxy, CF₃; and p and q each independently have the values zero, one or two.

3. (Original) A method according to claim 1 or 2 in which the isoxazole or dione herbicide has the general formula (lb):

wherein R¹²⁰ is chlorine, bromine or trifluoromethyl; and R is hydrogen or -CO₂Et.

4. (Currently Amended) A method according to any one of the preceding claims claim 3 in which a substituted phenyl ring as defined in formulae (I); (Ia); or (Ib) as depicted in claim 1, 2 or 3 is attached to a grouping:

- 5. (Original) A method according to claim 4 in which the phenyl ring is substituted by two groups independently selected from halogen, alkyl, $S(O)_{P}$ alkyl (p = 0, 1 or 2) or haloalkyl.
- 6. (Currently Amended) A method according to claim 1, 2 or 3 in which a substituted phenyl ring as defined above in formula (I); (Ia); or (Ib) is attached to a grouping;



7. (Original) A method according to claim 1 wherein the compound of formula (I) is:

5-cyclopropyl-4-[2-chloro-3-ethoxy-4-(ethylsulphonyl)benzoyl]isoxazole;

4-(4-chloro-2-methylsulphonylbenzoyl)-5-cyclopropylisoxazole;

5-cyclopropyl-4-(2-methylsulphonyl-4-trifluoromethylbenzoyl)isoxazole;

4-(4-bromo-2-methylsulphonylbenzoyl)-5-cyclopropylisoxazole;

5-cyclopropyl-4-[4-fluoro-3-methoxy-2-(methylsulphonyl)benzoyl]isoxazole;

4-(4-bromo-2-methylsulphonylmethylbenzoyl)-5-cyclopropylisoxazole;

ethyl 5-cyclopropyl-4-(2-methylsulphonyl-4-trifluoromethylbenzoyl) isoxazole-3-carboxylate;

2-[2-chloro-(4-methylsulphonyl)benzoyl]-1,3-cyclohexanedione;

2-[2-nitro-(4-methylsulphonyl)benzoyl]-1,3-cyclohexanedione;

2-(2,3-dihydro-5,8-dimethyl-1, 1-dioxospiro[4H-1-benzothiin-4,2' [1,3]dioxolan]-6-ylcarbonyl)cyclohexane-1, 3-dione;

5-cyclopropyl-4-(2-methylsulphonyl-4-trifluoromethylbenzoyl)-3-methylthio-isoxazole; and 2-cyano-3-cyclopropyl-1-(2-methylsulphonyl-4-trifluoromethylphenyl) propan-1,3-dione.

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- 8. (Original) A method according to claim 7 in which the compound is 5-cyclopropyl-4-(2-methylsulphonyl-4-trifluoromethylbenzoyl)isoxazole or 2-[2-nitro-(4-methylsulphonylbenzoyl]-1,3-cyclohexanedione.
- 9. (Original) A method according to claim 1 in which the antidote is selected from: flurazole; fenchlorazole-ethyl; fenchlorazole; benoxacor; dichlormid; fenclorim; furilazole; mefenpyr-diethyl; CMPI; 4-hydroxy-1-methyl-3-(1-1*H*-tetrazol-5-ylmethanoyl)-1*H*-quinolin-2-one; daimuron; (S)-MBU; dimepiperate; 5,5-diphenylisoxazoline-3-carboxylic acid; and ethyl 5,5-diphenylisoxazoline-3-carboxylate.
- 10. (Original) A method according to claim 1 in which the antidote is selected from fenchlorazole; CMPI; 4-hydroxy-l-methyl-3-(1-1*H*-tetrazol-5-ylmethanoyl)-l*H*-quinolin-2-one; (S)-MBU and dimepiperate.
- 11. (Currently Amended) A method according to any one of the preceding claims claim 1 in which the crop plant to be protected is maize.
- 12. (Original) A method according to claim 1 in which the application rate of the benzoylisoxazole and/or dione of formula (I) is from 0.004 kg to 5 kg per hectare.
- 13. (Original) A method according to claim 1 in which the application rate of the benzoylisoxazole and/or dione of formula (I) is from 0.01 kg to 2 kg per hectare.
- 14. (Currently Amended) A method according to any one of the preceding claims claim 1 in which (a) the herbicidal benzoylisoxazole and/or dione derivative and (b) antidote are applied separately such that the antidote contacts the seed or plant being treated before the herbicidal compound.
- 15. (Original) A herbicidal composition comprising:
 - (a) a herbicidally effective amount of a benzoylisoxazole and/or dione derivative of

- formula (I) or an agriculturally acceptable salt or metal complex thereof, optionally in combination with a partner herbicide; and
- (b) an antidotally effective amount of an antidote compound;
 in association with a herbicidally acceptable diluent or carrier and/or surface active agent.
 16. (Original) A composition according to claim 15 which comprises the component (a) as a delayed release formulation.
- 17. (Original) A composition according to claim 15 or 16 in which the weight ratio of the compound of formula (I): antidote is from 1:25 to 60:1.
- 18. (Original) A product comprising:
 - (a) a herbicidally effective amount of a benzoylisoxazole and/or dione derivative of formula (I), or an agriculturally acceptable salt or metal complex thereof; and
- (b) an antidotally effective amount of an antidote; wherein said antidote is antidotally effective to said benzoylisoxazole and/or dione derivative; as a combined preparation for separate, simultaneous or sequential use in the control of weeds at a locus.
- 19. (Original) A product according to claim 18 as a combined preparation for use in which the antidote contacts the seed or plant being treated before the herbicidal compound.
- 20. (Original) A method according to claim 1 substantially as hereinbefore described.
- 21. (Original) A composition according to claim 15 substantially as hereinbefore described.
- 22. (Original) A product according to claim 18 substantially as hereinbefore described.
- 23. (Previously Presented) A method of reducing phytotoxicity to a crop at a locus caused by the application thereto of a herbicidal benzoylisoxazole and/or dione derivative of formula (I):

$$A \longrightarrow (R^2)_z \tag{I}$$

wherein

A is a group (A-1), (A-2) or (A-3):

R is a hydrogen atom or a halogen atom; a straight- or branched chain alkyl, alkenyl or alkynyl group containing from one to six carbon atoms which is optionally substituted by one or more halogen atoms; a cycloalkyl group containing from 3 to 6 carbon atoms optionally substituted by one or more groups R^5 , one or more halogen atoms; or a group selected from $-CO_2R^3$, $-COR^5$, cyano, nitro, $-CONR^3R^4$ and $-S(O)_kR^{13}$;

R¹ is straight- or branched-chain alkyl, alkenyl or alkynyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; or a cycloalkyl group containing from three to six carbon atoms optionally substituted by one or more groups R⁵ or one or more halogen atoms;

 R^2 is a halogen atom; a straight- or branched-chain alkyl, alkenyl or alkynyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; a straight- or branched-chain alkyl group containing up to six carbon atoms which is substituted by one or more groups $-OR^5$ or a group selected from nitro, cyano, $-CO_2R^5$, $-S(O)_pR^6$, $-O(CH_2)_mOR^5$, -

 COR^5 , $-NR^{11}R^{12}$, $-N(R^8)SO_2R^7$, $-N(R^8)CO_2R^7$, $-OR^5$, $-OSO_2R^7$, $-SO_2R^7$, $-SO_2NR^3R^4$, $-CSNR^3R^4$, $-(CR^9R^{10})_v$ - $S(O)_0R^7$ and $-SF_5$;

or two groups R^2 , on adjacent carbon atoms of the phenyl ring may, together with the carbon atoms to which they are attached, form a 5 to 7 membered saturated or unsaturated heterocyclic ring containing up to three ring heteroatoms selected from nitrogen, oxygen and sulfur, which ring is optionally substituted by one or more groups selected from halogen, nitro, $-S(O)_qR^{13}$, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, = O (or a 5- or 6- membered cyclic acetal thereof), and $=NO-R^3$, it being understood that a sulphur atom, where at present in the ring, may be in the form of a group -SO- or $-SO_2$ -;

z is an integer from one to five: when z is greater than one the groups R² may be the same or different;

R³ and R⁴ are each independently a hydrogen atom, or a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; R⁵ is a straight- or branched-chain alkyl group containing up to six atoms which is optionally substituted by one or more halogen atoms or a straight- or branched-chain alkenyl or alkynyl group containing from two to six carbon atoms which is optionally substituted by one or more halogen atoms;

R⁶ and R⁷, which may be the same or different, are each R⁵; or phenyl optionally substituted by from one to five groups which may be the same or different selected from a halogen atom, a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms, nitro, cyano, -CO₂R⁵, S(O)_pR¹³, -NR¹¹NR¹², -OR⁵ and -CONR³R⁴;

R⁸, R⁹ and R¹⁰ are each a hydrogen atom or R⁶;

R¹¹ and R¹² are each a hydrogen atom or R⁵;

R¹³ is a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one ore more halogen atoms;

p and q are each independently zero, one or two;

k and m are each one, two or three;

y is an integer from one to four; when y is greater than one; the groups R⁹ and R¹⁰ may be the same or different;

or an agriculturally acceptable salt or metal complex thereof;

which method comprises applying to the locus of the crop before the herbicidal compound an antidotally effective amount of an antidote compound, and optionally partner herbicide, wherein the antidotally compound is a compound selected from the group consisting of ethyl 5,5-diphenylisoxazoline-3-carboxylate and 5,5-diphenylisoxazoline-3-carboxylic acid.

24. (Previously Presented) A method according to claim 23 wherein the compound of formula(I) is a compound of the formula (la):

wherein:

R is hydrogen or -CO₂Et;

 R^{117} is selected from $-S(O)_pMe$, Me, Et, a chlorine, bromine or fluorine atom, methoxy, ethoxy and $-CH_2S(O)_qMe$;

R¹¹⁸ is selected from a hydrogen atom, a chlorine, a bromine or fluorine atom, methoxy, ethoxy and -S(O)_pMe;

R¹¹⁹ is selected from a hydrogen atom, a chlorine, a bromine or fluorine atom, methoxy and CF₃; and p and q each independently have the values zero, one or two.

25. (Previously Presented) A method according to claim 24 in which the compound of the

formula (I) is a compound of formula (lb):

wherein R¹²⁰ is chlorine, bromine or trifluoromethyl; and R is hydrogen or -CO₂Et.

26. (Previously Presented) A method according to claim 25 in which the compound of the formula (I) is

 $5\hbox{-}cyclopropyl\hbox{-}4\hbox{-}(2\hbox{-}methylsulphonyl\hbox{-}4\hbox{-}trifluoromethylbenzoyl) is oxazole.$

27. (Previously Presented) A method according to claim 26 in which the antidote compound is ethyl 5,5-diphenylisoxazoline-3-carboxylate.

- 28. (Previously Presented) A method according to claim 26 in which the antidote compound is 5,5-diphenylisoxazoline-3-carboxylic acid.
- 29. (Previously Presented) A method according to claim 23 wherein A in formula (I) is a group of the formula

- 30. (Previously Presented) A method according to claim 29 in which the antidote compound is ethyl 5,5-diphenylisoxazoline-3-carboxylate.
- 31. (Previously Presented) A method according to claim 29 in which the antidote compound is 5,5-diphenylisoxazoline-3-carboxylic acid.
- 32. (Previously Presented) A method according to claim 30 wherein $(R^2)_z$ in formula (I) is 2-methylsulfonyl-4-trifluoromethyl.
- 33. (Previously Presented) A method according to claim 31 wherein (R²)_z in formula (I) is 2-methylsulfonyl-4-trifluoromethyl.
- 34. (Previously Presented) A method as claimed in claim 23, wherein in the compound of formula (I):
- A is a group (A-1):

$$\begin{array}{c|c}
R & & & \\
\hline
N & & & \\
\hline
N & & & \\
\end{array}$$
(A-1)

in which R is $-S(O)_k R^{13}$.

35. (Previously Presented) A method as claimed in claim 34, wherein

R is $SO-R^{13}$ or SO_2R^{13} ,

R¹ is cyclopropyl, and

R¹³ is an alkyl group containing up to six carbon atoms.

36. (Previously Presented) A herbicidal composition comprising

- (a) a herbicidally effective amount of a compound of formula (I) as defined in claim 23 or an agriculturally acceptable salt or metal complex thereof, optionally in combination with a partner herbicide; and
- (b) an antidotally effective amount of an antidote compound selected from ethyl 5,5-diphenylisoxazoline-3-carboxylate and 5,5-diphenylisoxazoline-3-carboxylic acid.
- 37. (Previously Presented) A herbicidal composition as claimed in claim 36 wherein the herbicidal compound of formula (I) is 5-cyclopropyl-4-(2-methylsulphonyl-4-trifluoromethylbenzoyl)isoxazole.

- 38. (Previously Presented) A herbicidal composition as claimed in claim 37 wherein the antidote compound is ethyl 5,5-diphenylisoxazoline-3-carboxylate.
- 39. (Previously Presented) A herbicidal composition as claimed in claim 37 wherein the antidote compound is 5,5-diphenylisoxazoline-3-carboxylic acid.
- 40. (Previously Presented) A herbicidal composition as claimed in claim 39 wherein the weight ratio of the compound of formula (I): antidote is from 1:25 to 60:1.
- 41. (New) A selective herbicidal composition comprising, in addition to customary inert formulation assistants, a mixture of
 - a) a herbicidally effective amount of a compound of formula I

(I)

Q CH₃

wherein

Q is the group

$$(Q_1)$$

and

b) to antagonize the herbicide, an antidotally effective amount of a safener of formula II

- 42. (New) A herbicidal composition comprising:
 - (a) a herbicidally effective amount of a compound of formula (I):

$$(R^2)_z \qquad (I)$$

wherein

A is a group (A-1), (A-2) or (A-3):

R is a hydrogen atom or a halogen atom; a straight- or branched chain alkyl, alkenyl or alkynyl group containing from one to six carbon atoms which is optionally substituted by one or more

halogen atoms; a cycloalkyl group containing from 3 to 6 carbon atoms optionally substituted by one or more groups R^5 , one or more halogen atoms; or a group selected from $-CO_2R^3$, $-COR^5$, cyano, nitro, $-CONR^3R^4$ and $-S(O)_kR^{13}$;

R¹ is straight- or branched-chain alkyl, alkenyl or alkynyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; or a cycloalkyl group containing from three to six carbon atoms optionally substituted by one or more groups R⁵ or one or more halogen atoms;

 R^2 is a halogen atom; a straight– or branched-chain alkyl, alkenyl or alkynyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; a straight- or branched-chain alkyl group containing up to six carbon atoms which is substituted by one or more groups $-OR^5$ or a group selected from nitro, cyano, $-CO_2R^5$, $-S(O)_pR^6$, $-O(CH_2)_mOR^5$, $-COR^5$, $-NR^{11}R^{12}$, $-N(R^8)SO_2R^7$, $-N(R^8)CO_2R^7$, $-OR^5$, $-OSO_2R^7$, $-SO_2R^7$, $-SO_2NR^3R^4$, $-CSNR^3R^4$, $-(CR^9R^{10})_y-S(O)_qR^7$ and $-SF_5$;

or two groups R^2 , on adjacent carbon atoms of the phenyl ring may, together with the carbon atoms to which they are attached, form a 5 to 7 membered saturated or unsaturated heterocyclic ring containing up to three ring heteroatoms selected from nitrogen, oxygen and sulfur, which ring is optionally substituted by one or more groups selected from halogen, nitro, $-S(O)_qR^{13}$, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, = O (or a 5- or 6- membered cyclic acetal thereof), and =NO- R^3 , it being understood that a sulphur atom, where at present in the ring, may be in the form of a group -SO- or $-SO_2$ -;

z is an integer from one to five: when z is greater than one the groups R² may be the same or different;

R³ and R⁴ are each independently a hydrogen atom, or a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms; R⁵ is a straight- or branched-chain alkyl group containing up to six atoms which is optionally substituted by one or more halogen atoms or a straight- or branched-chain alkenyl or alkynyl group containing from two to six carbon atoms which is optionally substituted by one or more halogen atoms;

R⁶ and R⁷, which may be the same or different, are each R⁵; or phenyl optionally substituted by from one to five groups which may be the same or different selected from a halogen atom, a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one or more halogen atoms, nitro, cyano, -CO₂R⁵, S(O)_pR¹³, -NR¹¹NR¹², -OR⁵ and -CONR³R⁴;

R⁸, R⁹ and R¹⁰ are each a hydrogen atom or R⁶;

R¹¹ and R¹² are each a hydrogen atom or R⁵;

R¹³ is a straight- or branched-chain alkyl group containing up to six carbon atoms which is optionally substituted by one ore more halogen atoms;

p and q are each independently zero, one or two;

k and m are each one, two or three;

y is an integer from one to four; when y is greater than one; the groups R⁹ and R¹⁰ may be the same or different;

or an agriculturally acceptable salt or metal complex thereof, optionally in combination with a partner herbicide; and

- (b) an antidotally effective amount of an antidote compound; and
- (c) one or more herbicidally acceptable diluents, carriers and/or surface active agents.

- 43. (New) The herbicidal composition as claimed in claim 42, wherein the herbicidal compound of formula (I) is 5-cyclopropyl-4-(2-methylsulphonyl-4-trifluoromethylbenzoyl)isoxazole.
- 44. (New) The herbicidal composition as claimed in claim 42, wherein the antidote compound is 5,5-diphenylisoxazoline-3-carboxylic acid.